CLAIMS

1. A packet-based communication routing device, comprising:

one or more inputs that receive information packets on a network and one or more outputs that transmit information packets onto the network;

a first processor coupled to said inputs and said outputs, said first processor processing one of the information packets including examining one or more flag values in each information packet and transmitting the information packet to one of said outputs if the flag values do not match a predetermined value for that routing device;

a second processor coupled to said first processor, wherein said first processor transmits an information packet to the second processor if the one or more flag values match a predetermined value for that routing device; and

wherein the second processor processes the information packet before transmitting the information packet to one of said outputs.

2. The packet-based communication routing device of Claim 1 wherein the flag value contains a data element identifying a filtered router alert option.

3. The packet-based communication routing device of Claim 1 wherein the flag value identifies the type of data from the information packet to be processed by the second processor.

4. The packet-based communication routing device of Claim 1 wherein the flag value identifies a condition on the routing device that indicates the information packet should be forwarded to the second processor.

5. The packet-based communication routing device of Claim 1 wherein the flag value identifies the routing device as an edge router.

6. The packet-based communication routing device of Claim 1 wherein the flag value identifies the routing device as a gateway.

7. The packet-based communication routing device of Claim 1 wherein the flag value identifies the routing device as an interface.

8. A method for routing an information packet on a packet-based communication system comprising the steps of:

receiving an information packet on an input of a router;

checking a flag value in the information packet at a first processor to determine if the information packet requires processing on a second processor;

forwarding the information packet to an output on the router for transmission onto the network if the flag value does not match a predetermined value;

forwarding the information packet to a second processor for processing in response to a match of the flag value to said predetermined value; and

forwarding the information packet from the second processor to said output for transmission onto the network after said processing is completed.

9. The method for routing an information packet on a packet-based communication system of Claim 8 wherein the flag value contains a data element identifying a filtered router alert option.

10. The method for routing an information packet on a packet-based communication system of Claim 8 wherein the flag value indicates the portions of the information packet that require processing at the second processor.

11. The method for routing an information packet on a packet-based communication system of Claim 8 further comprising the step of:

processing the information packet on an edge router.

12. The method for routing an information packet on a packet-based communication system of Claim 8 further comprising the steps of:

processing the information packet on a gateway.

13. The method for routing an information packet on a packet-based communication system of Claim 8 further comprising the step of:

processing the information packet on an interface

14. The method for routing an information packet on a packet-based communication system of Claim 8 further comprising the step of:

processing the information for use by an application.

15. A method for routing an information packet on a packet-based communication system comprising the steps of:

receiving an information packet on an input of a first router;

checking a flag value in the information packet at a first processor to determine if the information packet requires processing on a second processor;

forwarding the information packet to an output on the first router for transmission onto the network if the flag value does not match a predetermined value;

forwarding the information packet to a second processor for processing in response to a match of the flag value to said predetermined value;

forwarding the information packet from the second processor to said output for transmission onto the network after processing is completed; and

retrieving specific data from the information packet during processing.

16. The method for routing an information packet on a packet-based communication system of Claim 15 wherein a filtered router alert includes a type data field and a flag value data field.

17. The method for routing an information packet on a packet-based communication system of Claim 15 comprising the step of:

forwarding the retrieved data for use on an interface.

18. The method for routing an information packet on a packet-based communication system of Claim 15 further comprising the step of:

forwarding the retrieved data for use in an application.

19. The method for routing an information packet on a packet-based communication system of Claim 15 further comprising the step of:

forwarding the retrieved data for use on a gateway.

20. The method for routing an information packet on a packet-based communication system of Claim 15 further comprising the step of:

transmitting the retrieved data onto the network.